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OPINIONS AND DECLARATIONS RENDERED BY THE INTER- NATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

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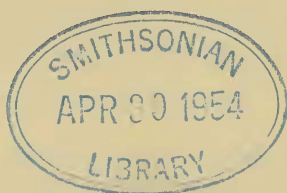
FRANCIS HEMMING, C.M.G., C.B.E.

Secretary to the Commission

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OPINION 206

Validation, under the Plenary Powers, of the generic
name *Diadema* Gray, 1825 (Class Echinoidea)



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INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

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OPINION 206

VALIDATION, UNDER THE PLENARY POWERS, OF THE GENERIC NAME "DIADEMA" GRAY, 1825 (CLASS ECHINOIDEA)

RULING :—(1) Under the Plenary Powers (a) the generic names *Diadema* Schumacher, 1817, and *Diadema* Ranzani, 1817 (Class Crustacea, Sub-Class Cirripedia) are suppressed for the purposes both of the Law of Priority and of the Law of Homonymy, and (b) the generic name *Diadema* Gray, 1825 (Class Echinoidea) is validated with *Echinometra setosa* Leske, 1778, as type species. (2) The generic name *Diadema* Gray, 1825 (gender of name : neuter) with type species as designated in (1) (b) above, is hereby placed on the *Official List of Generic Names in Zoology* as Name No. 633. (3) The generic names *Diadema* Schumacher, 1817, and *Diadema* Ranzani, 1817, as suppressed under the Plenary Powers under (1) (a) above, are hereby placed on the *Official Index of Rejected and Invalid Generic Names in Zoology* as Names Nos. 11 and 12. (4) The specific name *setosa* Leske, 1778, as published in the combination *Echinometra setosa*, is hereby placed on the *Official List of Specific Names in Zoology* as Name No. 9.

I.—THE STATEMENT OF THE CASE

Under cover of a letter dated 17th November 1932, the late Dr. Th. Mortensen (*Universitetets Zoologisk Museum, Copenhagen*) submitted, for the consideration of the International Commission on Zoological Nomenclature, a paper of his which had just been published (October 1932, *Ann. Mag. nat. Hist.* (10) **10** : 345—368) under the title "A Vote on some Echinoderm Names". This paper contained a discussion of eight disputed Echinoderm names and gave the result of an extensive canvas of opinion among Echinoderm specialists as to the action which it was desirable should be taken. The seventh of the names discussed in this paper was the name *Diadema*.

2. The recommendation submitted in regard to this case was that the name *Diadema* Gray, 1825, should be declared a *nomen conservandum* with *Echinometra setosa* Leske, 1778, as type species (: 363). This proposal was supported by thirty-three specialists and was opposed by six. The specialists who supported this proposal were :—(1) F. A. Bather (*British Museum (Natural History), London*) ; (2) A. G. Brighton (*Sedgwick Museum, Cambridge*) ; (3) Austin H. Clark (*United States National Museum, Washington, D.C.*) ; (4) J. Cottreau (*Muséum National d'Histoire Naturelle, Paris*) ; (5) E. D. Currie (*Hunterian Museum, Glasgow*) ; (6) A. M. Diakonov (*Zoological Museum, Leningrad*) ; (7) L. Döderlein (*Munich*) ; (8) Sv. Ekman (*Zoological Institute, Uppsala*) ; (9) A. Faas (*Geological Committee, Leningrad*) ; (10) D. M. Fedotov (*Zoological Laboratory, Leningrad*) ; (11) T. Gislén (*Zoological Institute, Uppsala*) ; (12) Seitaro Goto (*Tokio*) ; (13) J. W. Gregory (*Geological Department, University, Glasgow*) ; (14) J. A. Grieg (*Zoological Museum, Bergen*) ; (15) R. Hecker (*Geological Museum, Leningrad*) ; (16) S. Heding (*Zoological Museum, Copenhagen*) ; (17) Hérouard (*Laboratoire de Zoologie, La Sorbonne, Paris*) ; (18) N. von Hofsten (*Zoological Institute, Uppsala*) ; (19) F. Klinghardt (*Museum f. Naturkunde, Berlin*) ; (20) L. Lieberkind (*Zoological Museum, Copenhagen*) ; (21) Th. Mortensen (*Zoological Museum, Copenhagen*) ; (22) Aug. Nobre (*Zoological Institute, Porto, Portugal*) ; (23) H. Ohshima (*Zoological Laboratory, Fukuoka, Japan*) ; (24) A. Panning (*Zoological Museum, Hamburg*) ; (25) L. P. J. Ravn (*Palaeontological Department, University, Copenhagen*) ; (26) A. Reichen-sperger (*Zoological Institute, Bonn*) ; (27) W. E. Schmidt (*Preussische Geolog. Landesanstalt, Berlin*) ; (28) W. K. Spencer (*Ipswich, England*) ; (29) G. Stefanini (*Geological Institute, Pisa*) ; (30) Dom Aurélien Valette (*Saint-Léger-Vauban, France*) ; (31) C. Vaney (*Laboratoire de Zoologie, Lyon*) ; (32) J. Wanner (*Geological Institute, Bonn*) ; (33) N. Yakovlev (*Geological Committee, Leningrad*). The six specialists who were opposed to the action recommended in the present case were :—(1) H. L. Clark (*Museum of Comparative Zoology, Cambridge, Mass.*) ; (2) R. T. Jackson (*Museum of Comp. Zoology, Cambridge, Mass.*) ; (3) E. Deichmann (*Museum of Comp. Zoology, Cambridge, Mass.*) ; (4) W. K. Fisher (*Hopkins Marine Station, Pacific Grove, California*) ; (5) H. L. Hawkins (*Geological Department, University, Reading*) ; (6) J. Lambert (*Paris*).

II.—THE SUBSEQUENT HISTORY OF THE CASE

3. In December 1932 the then Secretary (the late Dr. C. W. Stiles) reported Dr. Mortensen's application to the Commission in Circular Letter 220. On 20th December of that year, he wrote also to the Director of the United States Geological Survey, expressing the hope that arrangements might be made for these proposals to be examined by the palaeontologists of the Survey. On 19th January 1933 the Director replied, forwarding five comments by members of the staff, of which one was signed by two workers. These comments, so far as they relate to the present case, were as follows :—

(a) *Comment by L. W. Stephenson and C. Wythe Cooke :*

I am in favor of codifying names concerning the strict validity of which there may be some question, if they have been in generally accepted use for long periods, but when it can be shown clearly that some other name has priority over a later more generally used name . . . is there not a danger of adding to, rather than subtracting from, the confusion? Will not some authors accept the rulings of the International Commission, while others will continue stoutly to maintain the validity of the names having priority? Furthermore, will not such rulings encourage a flood of demands for suspension of the rules?

(b) *Comment by Lloyd G. Henbest :*

Dr. Mortensen's petition to conserve and restore certain Echinoderm names seems to be reasonable except in the cases of *Diadema* . . .

The effort to restore the name *Diadema* involves an issue which is larger than that of the two generic names; to wit, the arbitrary perpetuation of a confused and invalid name merely for the sake of convenience *versus* the principles of priority rights of the reviser and also the value of clarifying our system of nomenclature through individual effort that is directed along lines of well-established and plainly legal procedure. It seems to me that the perspicacity of a reviser is more worthy of honor than the indolence or ignorance of his predecessors.

A related issue is also involved. As presented, the solution of the problem of *Diadema* is not only clear and self evident, but it has also been effected by a procedure which is in complete accordance with the International Code. If this is true, I believe that the International Commission has no cause for action unless it act to uphold the valid name *Centrechinus*.

(c) *Comment (dated 6th January 1933) by John B. Reeside Jr. :*

I see no particular objection to placing all of the names on the *List of established names*.

(d) *Comment by Edwin Kirke :*

I concur, except in the case of *Diadema*. Here I think that *Centrechinus* is valid.

(e) *Comment (dated 16th January 1933) by W. P. Woodring :*

I am not familiar with the usage of these Echinoderm names, but as a general principle—other things being equal—I am in favor of special protection for names of long-standing usage that are being threatened.

4. In December 1933 Dr. Stiles reported to the Commission (in Circular Letter 245) the comments received earlier that year from the palaeontologists of the Geological Survey. In March 1935 Dr. Stiles reported to the Commission (in Circular Letter 291) that he had received no further comments on this or the other proposals submitted by Dr. Mortensen and his colleagues, and suggested that those proposals should be considered by the Commission when it met at Lisbon in September of that year.

5. When the International Commission assembled at Lisbon in 1935, it found itself handicapped in dealing with these proposals through the absence of the Secretary through ill-health and the fact that the documents relating to the name *Diadema* and the associated cases were not available. At the Fourth Meeting of that Session held in the Library of the Faculty of Sciences on Tuesday, 17th September 1935 at 0930 hours, the International Commission did, however, give preliminary consideration to the case of *Diadema*. The case in favour of the application was presented personally by Dr. Mortensen who was present as an Alternate Commissioner. In the discussion which ensued, Commissioner Francis Hemming pointed out that the proposal that the name *Diadema* should be validated as from Gray, 1825, involved difficulties which, so far as he was aware, had not been adequately examined, for the name *Diadema* of Gray, 1825, was a junior homonym of *Diadema* Schumacher and *Diadema* Ranzani, both names published in 1817 for genera of the Sub-Class Cirrhipedia (Class Crustacea), while the oldest use of the name *Diadema* for the well-known Echinoid genus—namely *Diadema* Humphrey, 1797—was not available, the Commission having, in *Opinion* 51, pronounced against the acceptance of the work entitled *Museum Calonnianum*, in which it had been published.

Mr. Hemming added that, while, in view of the massive support given to the proposal submitted in this case, he was, in principle, in favour of its acceptance, he considered that it needed further consideration in its technical aspects. This view was shared by the International Commission. The following is an extract from the Official Record of its Proceedings setting out the decision then reached (Lisbon Session, 4th Meeting, Conclusion 1) (1943, *Bull. zool. Nomencl.* 1 : 32—33) :—

THE COMMISSION agreed :—

- (a) to postpone for further consideration the case of the name *Diadema* Gray, 1825 (Echinodermata) ;
- (b) to invite Dr. Mortensen and Commissioner Hemming to confer together with a view to the submission to the Commission of all the data required to enable a decision to be reached.

6. Throughout the first half of 1936 extensive consultations took place by correspondence between Dr. Mortensen and Mr. Hemming on the problem referred to them by the Commission at its Lisbon Session, these consultations culminating in a meeting held in London on 22nd July 1936. Two problems were examined : first, the question whether the name *Diadema*, as applied in 1817 to a genus of Cirripedia, was still in use by specialists in the Crustacea ; second, if the name *Diadema* was to be preserved by the Commission for the Echinoid genus, should this be done (1) by validating *Diadema* Humphrey, 1797, or (2) by suppressing the Cirripede names *Diadema* Schumacher, 1817, and *Diadema* Ranzani, 1817? The difficulty envisaged in the first of these questions entirely disappeared when it was ascertained that the name *Diadema*, as applied to a genus of Cirripedia by Schumacher and Ranzani, was a dead synonym in the literature, being objectively identical with *Coronula* Bruguière, 1792. Later, Professor

Hj. Broch (*Oslo*), the eminent authority on the Cirripedia, informed Dr. Mortensen that the name *Coronula* was so generally known that, even if *Diadema* Schumacher had priority over it, it would only lead to confusion to change it. The first of the two questions having been disposed of in this manner, Dr. Mortensen and Mr. Hemming turned to consider the remaining problem. On this question, they took the view that, on balance, the most satisfactory course would be to date *Diadema* for the Echinoid genus from Humphrey, 1797, though this would involve the withdrawal, in this instance, of the Commission's condemnation of the work entitled *Museum Calonnianum*. It was accordingly decided that the revised application by Dr. Mortensen should be framed on this basis. An examination by Dr. Mortensen of Humphrey's remarks about *Diadema* led him to maintain his earlier proposal that the International Commission should be asked to designate *Echinometra setosa* Leske, 1778, as the type species of *Diadema*.

7. Dr. Mortensen's revised proposal was submitted to the Commission in April 1937. It was as follows :—

**Proposed suspension of the "Règles" for the generic name
"Diadema" Humphrey, 1797 (Class
Echinoidea, Order Aulodonta)**

By TH. MORTENSEN

(*Universitets Zoologiske Museum, København*)

In "A Vote on some Echinoderm Names" (1932, *Ann. Mag. nat. Hist.* (10)10 : 360—365) I gave a full account of the history of this name, *Diadema*, from its first appearance in literature in 1711 until 1912, when after having been in constant and unanimous use in the whole echinological literature, zoological and palaeontological, it was rejected by Jackson as being a synonym of the Cirripedian *Coronula* Schumacher, 1817, and substituted by the name *Centrechinus*. With the exception of Jackson, H. L. Clark, Deichmann, Fisher, and Hawkins, all Echinologists sided with me in recommending that the name *Diadema* (Order Aulodonta, Suborder Diademina) should be made a *nomen conservandum* for the Echinoids, with genotype *Echinometra setosa* Leske, the species that has always been regarded as such.

When at the International Zoological Congress in Lisbon, 1935, I brought the case of the name *Diadema* before the Commission on Nomenclature, Mr. Francis Hemming advised to have it adjourned

until the use of this name in the *Museum Calonnianum*, 1797, had been made the object of a careful investigation. During a visit to London in July 1936 I had the opportunity of undertaking such investigation, the result of which I publish here.

In the said "Vote on some Echinoderm Names" I stated (: 361) as follows:—"In the anonymous *Museum Calonnianum*, 1797 (: 64), the name *Diadema* is used as a genus-name for Echinoids, but it is not possible to see which species should be regarded as the type of this genus". It was on the authority of Jackson ("Phylogeny of the Echini" : 27)* that I gave this statement (I had at that time never seen the *Museum Calonnianum*), but the statement is not correct, as the following analysis will show.

The *Museum Calonnianum* (whose author has been shown to be the London naturalist-dealer G. Humphrey) has under the "Class II. Echinus. Oursin de Mer—Sea Urchin" the following five genera : *Placenta*, *Scutum*, *Cor*, *Diadema* and *Cidaris*. Although it is quite possible to identify several of the species enumerated under these genera, there is no reason for entering on a discussion of all of them. It is only the genus *Diadema* that has any interest and needs a detailed discussion.

Under the genus *Diadema* Turban, the following species are enumerated :—

1183. *vulgatum*. (a) with the spines on. L'Ordinaire—Common. Normandy.

This no doubt must be the common N. Atlantic species *Psammechinus miliaris* (Müll.).

1184. *orbiculatum*. L'Orbiculaire—Orbicular. Normandy. *Echinus esculentus* Linn.

This is clear enough. It is curious that Humphrey gives new names to several species which he identifies with Linnean species—e.g., *Echinus orbicularis*, *Echinus rosaceus*.

1185. *depressum*. Le Plat—Flatted. West Indies.

This species cannot be identified.

1186. (misprint 1116). *virescens*. Les Epines Vertes—Greenspined. Newfoundland. Has the spines on.

This can clearly only be *Strongylocentrotus droebachiensis*. (O.Fr. Müller.)

* Jackson says here : "There are 12 species listed under *Diadema*, but of these only one is recognisable, as it is stated to be the same as *Echinus esculentus* Linné. On this evidence, if this work should be accepted, which is very doubtful, the genus *Diadema* would become a synonym of *Echinus*, as *esculentus* is the type of that genus." The fact that several of the species, not only the first one, are recognisable does away with this argument for regarding *Diadema* as a synonym of *Echinus*.

1187. *aciculatum*. Les Epines Pourpres—(dark) Purple, (long) Needle-spined. Mediterranean. Has the spines on. (The words “dark” and “long” are handwritten additions in the copy of the British Museum.)

This can clearly only be *Paracentrotus lividus* (Lamarck.).

1188. *ovatum*. (a) Native colour, with the teeth and some of the spines; (b) bleached; (c) opened to show the internal structure. L’Oeuf—Egg. West Indies.

This may probably be *Tripneustes esculentus* (Leske).

1189. *rotundum*. Le Circulaire—Circular. East Indies.
Unidentifiable.

1190. *limatum*. Les Epines en forme de Lime—Blunt file-like, spined. West Indies.

This can very well be *Diadema antillarum* Philippi (1845, *Archiv f. Naturgesch.* 1 : 355), as shown by the description of the spines.

1191. *subulatum*. Les Epines en forme d’Alêne—Awl-like, spined. West Indies.

This may perhaps be *Lytechinus variegatus* (Lamarck).

1192. *maculatum*. Les Epines Tachétées—Spotted red-spined. Mediterranean. Rare.

This must evidently be *Sphaerechinus granularis* (Lamarck).

1193. *striatum*. Les Epines Longues Striées—Long striated spined. Mediterranean. Rare. This has several of *Serpula lumbricalis*, species 15, entwined round its spines.

This must be one of the Mediterranean Cidarids, either *Cidaris cidaris* (Linn.) or *Stylocidaris affinis* (Philippi).

1194. *sceptiferum*. Les Epines au Sceptre Couronné—Coronated sceptre-spined. Tranquebar. M.P.3051. Extremely scarce. M.P. is *Museum Portlandianum*, 3051 : “The coronated sceptre-spined *Echinus*, extremely scarce, from the E. Indies, Favanne, pl. 80. fig. L, the only specimen of its kind in England”.

De Favanne. Conchyliologie, 1780, pl. 80. fig. L, is evidently *Plococidaris verticillata* (Lamarck).

Thus, among the identifiable species under Humphrey’s *Diadema* is one species, *limatum*, which may very well be the species always understood as *Diadema*, the *Diadema antillarum* Philippi, and since all the other identifiable species belong to long-established genera, Humphrey’s *Diadema limatum* would be the only suitable species to select as the genotype of *Diadema*.

The Echinoid genus name *Diadema* thus originates from Humphrey, 1797, not from Gray, 1825 ("An Attempt to divide the Echinida, or Sea Eggs, into Natural Families", *Annals of Philosophy* 26), as is usually stated, and very probably Gray did not mean to establish *Diadema* as a new genus of Echinoids. It can hardly be doubted that he knew the *Museum Calonnianum*, and that he took the name from there. In general, he adds the name of the author to his genera, and at the genera *Echinanthus* and *Echinolampas* he adds "nob.", thus directly indicating that here are new genera established by him. That he does not add any author's name to *Diadema* is quite natural, since *Museum Calonnianum*, from where he probably took it, is anonymous. Unfortunately this argument is not conclusive, since he does not add any "nob." either at *Astropyga*, which—so far as known—has not been used before 1825. But in any case, Gray is not the first to use the name *Diadema* for an Echinoid. The name dates from 1797 and thus has the absolute priority in the use for the Echinoids—even if we do not count Schynvoet's name from 1711 or Lamarck's use of the not latinised form "les Diadèmes" in 1816—and the name accordingly was preoccupied already when Schumacher in 1817 and Ranzani in 1820 used it for the Cirripedian *Lepas diadema* Linnaeus, for which Oken had, in 1815, established the genus *Coronula*. Schumacher's and Ranzani's *Diadema* is, of course, only a dead synonym of *Coronula* Oken*, but the Echinoid name *Diadema* Humphrey remains unaffected thereby.

Thus far there would seem to be no doubt of the validity of the name *Diadema*, as an Echinoid genus name. But, again, there is a complication.

The International Commission on Zoological Nomenclature has had a discussion about the *Museum Calonnianum*, resulting in the *Opinion* 51, which says: "The *Museum Calonnianum*, 1797, is not to be accepted as basis for any nomenclatorial work". The object of this *Opinion* was, of course, to prevent undesirable nomenclatorial changes based on this very little known work. If the Commissioners had known the case of the name *Diadema*, in which the *Museum Calonnianum* serves to prevent the extremely undesirable change of that name, they would hardly have given the *Opinion* 51 the quoted wording, the more so since the *Opinion* 51 was not accepted unanimously by the Commissioners. But this wording necessitates separate action in this case for declaring the Echinoid name *Diadema* a *nomen conservandum*.

A few words must be said about the question: which species of sea-urchin is to be the genotype of *Diadema*? If it were not already

* The eminent authority on Cirripedians, Professor Hj. Broch, Oslo, writes me that even if Schumacher's *Diadema* had priority before the name *Coronula*, the latter is so generally known that it could only bring confusion to change it. "I think it out of question that the name *Diadema* could, on the whole, be taken into consideration as a genus name of a Cirripedian. It is a 'dead synonym' of *Coronula*."

fixed, Humphrey's species *limatum* would have to be selected as the genotype, since it may be identical with the species now unanimously named *Diadema antillarum* Philippi. But Gray, *op. cit.*, already fixed the species "*Echinometra setosa*" of Leske as the genotype. In doing so he actually was in conformity with the opinion of the present author that the only species in the *Museum Calonnianum* that could be made the genotype of *Diadema* is *limatum* possibly=*Diadema antillarum* Philippi, this latter being at that time (as a matter of fact up till 1904) regarded as identical with the Indo-Malayan "*Echinometra setosa*" of Leske, the name *limatum* thus being apparently synonymous with the older name *setosum*.

Having regard to the foregoing considerations, to the universal use of the name *Diadema* for the Echinoids since Gray's time (up till 1912), and to the very unfortunate consequences (cf. "Vote on some Echinoderm names", 1932, *Ann. Mag. nat. Hist.* 10 (10) : 360—362) of dropping this name—not because any other animal has a legitimate claim to it, but, formerly, because it was erroneously thought to be merely a dead synonym of the Cirripedian *Coronula*, now, because *Opinion* 51 forbids the use of a name from the *Museum Calonnianum*—I recommend that the International Commission on Zoological Nomenclature, acting in virtue of the Plenary Powers conferred upon them by the International Zoological Congress, should issue an *Opinion* in the following sense :—

Nothing in *Opinion* 51 shall be held to invalidate the use of the generic name *Diadema* Humphrey (1797, *Mus. Calonn.* : 64) in Echinoids (genotype, as fixed by Gray, 1825, *Echinometra setosa* Leske, 1778), and that generic name is hereby added to the *Official List of Generic Names in Zoology*.

P.S.—The manuscript of this note I submitted to Professor H. L. Clark, asking for his opinion about it. He informs me that in his opinion the description of the spines of *Diadema limatum* rather suggests the West Indian Cidarid *Eucidaris tribuloides* (Lamarck) than *Diadema antillarum*. It had not occurred to me that the "file-like" spines could fit in with any other West Indian Echinoid than *Diadema antillarum*; but I have to agree that the spines of this Cidarid may, if well preserved, very well be described as "file-like", and, if special weight is given to the word "blunt", it is more likely that the *Diadema limatum* of Humphrey was *Eucidaris tribuloides*, the spines of *Diadema antillarum*, if well preserved, being certainly not to be described as "blunt". But if the spines are broken, as they would be sure to be in such an old specimen (these spines are exceedingly brittle and can only be kept tolerably intact on specimens treated very carefully, which, of course, they never were in olden days), they may very well be designated as blunt—as are actually the spines of the oral side, even when intact—and they are very decidedly and conspicuously *file-like*.

Accordingly the *Diadema limatum* of Humphrey may have been either *Eucidaris tribuloides* or *Diadema antillarum*.

Anyhow, it is unquestionable that the name *Diadema* was first used as a genus of Echinoids, including several recognisable species, one of which may very well be identical with *Diadema antillarum* Philippi, closely related with the species that Gray selected as the genotype of *Diadema*. And since this name has been in unanimous use in the whole of the zoological and palaeontological literature from 1825 till 1912, and particularly in that literature which must for ever remain the basis of echinological science—and has been used also in 1925 in a main work like H. L. Clark's "Catalogue of the Recent Sea-Urchins of the British Museum", and is used particularly in vol. 3 of my Monograph of the Echinoidea—it will be impossible ever to get rid of the name *Diadema* in the Echinoids. On the other hand, there is nothing to be said in favour of the name *Centrechinus*, used only after 1912, and not in a single work of primary importance; it will rapidly share the fate of the immense number of other useless synonyms. I may well recall also the numerous (more than 25) valid names of recent and fossil Echinoids composed of *Diadema* (cf. "Vote on some Echinoderm names": 362), and the general use of the technical term "diadematoid". I can only find it an absurdity to drop the name *Diadema* and must emphatically recommend to have it placed on the official list of generic names as a *nomen conservandum*.

8. This case which, on the reorganisation of the Secretariat, had been given the Registered Number Z.N.(S.)52, was considered further at the Plenary Conference between the President (Dr. Karl Jordan) and the Secretary to the Commission (Mr. Francis Hemming, who had been elected to that office in 1936 on the retirement of Dr. Stiles) held in London on Monday, 19th June 1939. The view then taken was that, although Dr. Mortensen's application in its revised form did not involve the use by the International Commission of its Plenary Powers, it was desirable that the Commission should be in a position to act under those Powers in this case, if on examination of this application, that were to appear to it to be the best course to follow. To this end, the Plenary Conference decided that notices of the possible use of the Plenary Powers in this case should at once be issued under the procedure prescribed by the Ninth International Congress of Zoology, Monaco, 1913 (Plenary Conference, Conclusion 17) (1943, *Bull. zool. Nomencl.* 1 : 85). The prescribed notice agreed upon by the Plenary Conference was duly issued on 27th June 1939.

9. The outbreak of war in Europe in September 1939 led to the evacuation of the records of the International Commission from

London to the country as a precaution against the risk of destruction through air raids. The Secretariat in London was re-opened in 1942 and steps were immediately taken to establish the *Bulletin of Zoological Nomenclature* as a means for bringing to the attention of zoologists applications submitted to the International Commission for decision. Work was at once started on outstanding applications with a view to arranging for their publication in the newly established *Bulletin*. The present application was sent to the printer in October 1944, but, owing to paper rationing, shortage of labour at the printing works and similar causes, publication did not actually take place until June 1946 (*Bull. zool. Nomencl.* 1 : 172—175).

10. In the meantime two comments had been received as the result of the notice which had been issued just before the outbreak of war regarding the possible use by the International Commission of its Plenary Powers in this case. Of these the first was from Dr. Hubert Lyman Clark (*Museum of Comparative Zoology at Harvard College, Cambridge, Massachusetts, U.S.A.*) and was dated 8th November 1944 (being a formalisation of a brief notification in the same sense which Dr. Clark had addressed to the Commission on 8th November 1939). The second comment, which was dated 13th November 1944, was furnished by Dr. Austin H. Clark (*Curator of the Division of Echinoderms, United States National Museum, Washington, D.C., U.S.A.*). Both these specialists had participated in the comprehensive consultation (paragraph 2 above) organised by Dr. Mortensen before the submission of his original application, and each in 1944 maintained the positions previously taken up, Dr. Hubert Lyman Clark remaining opposed to the application, Dr. Austin H. Clark continuing to give it his support. These supplementary statements are given in the two immediately following paragraphs.

11. The statement furnished by Dr. Hubert Lyman Clark in 1944 is as follows :—

Centrechinus vs. *Diadema*

The proposal to validate *Diadema* is unworthy of serious consideration since it is based purely on emotion—the preference for a familiar name to one that is less familiar. Every effort to stabilise nomenclature which involves the giving up of a name with which some zoologist is familiar meets this objection and since it is almost purely emotional,

it ought not to receive the consideration often given to it. Dr. Mortensen's great ability, his high standing as a zoologist, and his earnestness in this relatively unimportant matter have given undue prominence to the case of *Diadema*. It is true that *Diadema* was a universally used name for the genus of tropical sea-urchins with long, black poisonous spines, prior to 1912. It is further true that family and ordinal names were based on it, and some generic names in other families of Echini have "*diadema*" as an element in their composition. But there is so little occasion for reference to these sea-urchins in technical literature of other branches of science that it is doubtful if such reference can be found. Moreover, while the name is used in Lang's Comparative Anatomy and some other widely known works, it does not occur in Parker and Haswell's Textbook of Zoology or in most other smaller text-books in general use.

The above statements regarding the use of the name have little bearing however on the question of its special validation by fiat by the International Commission. It was not until 1912 that attention was called to the impropriety of using *Diadema* for a sea-urchin. In that year, Dr. R. T. Jackson in his great monograph "*Phylogeny of the Echini*" (*Mem. Boston Soc. Nat. Hist.*, vol. 7, p. 27) pointed out the error in using the name thus, and proposed the euphonious and satisfactory name *Centrechinus* to replace it. This name has been accepted by nearly all English-using workers on echinoderms during the past thirty years but has been violently opposed by Mortensen merely because *Diadema* is so much more "familiar". But it is familiar only to specialists in the group of Echinoderms and to many of us *Centrechinus* is just as familiar now. The validating of such an incorrect name as *Diadema* could only be justified if it were a name widely used for a single genus in general text-books or popular literature. As shown by both English and German Zoological "Nomenclators", *Diadema* has been used as a generic name in the groups Aves, Crustacea, Lepidoptera, and Mollusks, as well as Echini. It is only by an arbitrary favouritism that it can be restricted to Echini.

12. The statement furnished by Dr. Austin H. Clark in 1944 is as follows :—

The generic name *Diadema* Gray, 1825, was accepted by all students of echinoderms until 1912, when *Centrechinus* was proposed as a substitute by Jackson on the ground that *Diadema* Gray, 1825, was preoccupied by *Diadema* Schumacher, 1817.

Diadema Schumacher, 1817, never came into general use, being recognised as a synonym of *Coronula* Bruguière, 1792.

Diadema Gray, 1825, not only appears in a great number of technical contributions, but also has been widely used in text books and more or less popular treatises.

The name *Centrechinus* Jackson, 1912, has not as yet received general recognition even among students of the Echinoidea.

Therefore as matters stand at present, the retention of the name *Diadema* Gray, 1825, under a suspension of the rules is desirable, as otherwise much confusion will result.

Since the earlier *Diadema* Schumacher, 1817, has never been used, being very early recognised as a synonym of *Coronula*, there is no possibility of confusion between this and *Diadema* Gray, 1825.

May I venture to remark that—a fact well known to all administrators—too rigid interpretation of many categories of law tends to create a sentiment against them.

13. On 18th July 1946 Professor H. Engel (*Zoologisch Museum, Amsterdam, The Netherlands*) submitted the following statement of his views :—

Giving my opinion on Dr. Mortensen's application on the Echinoid name *Diadema* (Z.N.(S.) 52)—in *Bull. zool. Nomencl.* 1(8), p. 172 *seq.*—I think that the best thing would be to act in accordance with Dr. Mortensen's advice and to add the name *Diadema* to the *Official List*, for it would be nonsense to use such a well known name for a Cirripede, in which group it is obviously not welcome at all. What arguments are used is of little importance. I think that Dr. Mortensen has found an ingenious and elegant solution which I hope may prove to be acceptable.

14. In July 1947 Mr. F. Hemming paid a visit to Copenhagen, and took the opportunity to discuss with Dr. Mortensen the procedure best to be adopted in regard to the block of applications on Echinoderm names which he had submitted, when those applications came to be considered by the International Commission in Paris in the following year. Dr. Mortensen and Mr. Hemming agreed in the case of the name *Diadema*, to amend the proposal published in the *Bulletin* in 1946 by substituting for it a proposal that the name *Diadema* Schumacher, 1817, and the name *Diadema* Ranzani, 1817 (if that name was, in fact, distinct from that published by Schumacher) should be suppressed by the Commission under its Plenary Powers and that the name *Diadema* should be validated in the Class Echinoidea as from Gray, 1825, the author and date commonly attributed to this name, the type species of the genus, as previously proposed, to be designated as *Echinometra setosa* Leske, 1778.

III.—THE DECISION OF THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

15. The case of the name *Diadema* was considered by the International Commission on Zoological Nomenclature at the Thirteenth Meeting of its Paris Session held at the Sorbonne in the Amphithéâtre Louis-Liard on Monday, 26th July 1948 at 1730 hours. By this date, Dr. Mortensen was himself a Member of the Commission, but on the advice of his medical attendants, he had much to his regret felt bound at the last moment to cancel the arrangements which he had made to visit Paris for the purpose of attending the meetings of the International Commission (1950, *Bull. zool. Nomencl.* 4 : 2). In the greatly regretted absence of Dr. Mortensen, the case of the name *Diadema* was presented on his behalf by Mr. Francis Hemming, the proposal actually submitted being in the revised sense agreed upon between Dr. Mortensen and himself at their meeting in Copenhagen in 1947 (paragraph 14). The following is an extract from the portion of the Official Record of the Proceedings of the International Commission setting out the decision reached by it in regard to this case at the meeting referred to above (Paris Session, 13th Meeting, Conclusion 27) (1950, *Bull. zool. Nomencl.* 4 : 383—385) :—

THE COMMISSION agreed :—

(1) to use their Plenary Powers :—

(a) to suppress the names *Diadema* Schumacher, 1817, and *Diadema* Ranzani, 1817 (Class Crustacea, Sub-Class Cirripedia) ;

(b) to validate the name *Diadema* Gray, 1825 (Class Echinoidea) with *Echinometra setosa* Leske, 1778, as type species ;

(2) to place the generic name *Diadema* Gray, 1825, validated as above and with the above species as its type species, on the *Official List of Generic Names in Zoology* ;

- (3) to place the generic names *Diadema* Schumacher, 1817, and *Diadema* Ranzani, 1817, on the *Official Index of Rejected and Invalid Generic Names in Zoology* ;
- (4) to place the trivial name *setosa* Leske, 1778 (as originally published in the binominal combination *Echinometra setosa*) on the *Official List of Specific Trivial Names in Zoology* ;
- (5) to render an *Opinion* recording the decisions specified in (1) to (4) above.

16. The following are the original references to the names which appear in the decision set out in the immediately preceding paragraph :—

Diadema Schumacher, 1817, *Essai nouv. Syst. Habitations Vers test.* : 34, 90

Diadema Ranzani, 1817, *Opusc. Sci.*, Bologna **1** : 276

Diadema Gray (J.E.), 1825, *Ann. Phil.* **26** : 426

setosa Echinometra, Leske, 1778, *J. T. Klein Nat. Dispositio Echinodermat. Addit.* : 35, pl. 37, figs. 1—12 ; pl. 47, figs. 1—2

17. The gender of the generic name *Diadema* Gray, 1825, referred to in the decision quoted in paragraph 15 above, is neuter.

18. The decision taken in this case was reported to, and approved by, the Section on Nomenclature of the Thirteenth International Congress of Zoology, Paris, 1948, at its Fifth Meeting held on 26th July 1948 (1950, *Bull. zool. Nomencl.* **5** : 107).

19. The Ruling given in the present *Opinion* was concurred in by the sixteen (16) Commissioners and Alternate Commissioners present at the Paris Session of the International Commission, namely :—

Beltrán *vice* Cabrera ; Boschma ; Bradley ; di Caporiacco ; Hemming ; Hindle *vice* Jordan ; Jorge *vice* do Amaral ; Kirby *vice* Stoll ; Lemche *vice* Dymond ; Mansour *vice* Hankó ; Metcalf *vice* Peters ; Riley *vice* Calman ; Rode ; Spärck *vice* Mortensen ; van Straelen *vice* Richter ; Usinger *vice* Vokes.

20. The Ruling given in the present *Opinion* was dissented from by no Commissioner or Alternate Commissioner present at the Paris Session.

21. At the time of the adoption of the Ruling given in the present *Opinion*, the expression prescribed for the second portion of the binomen which constitutes the scientific name of a species was the expression "trivial name" and the *Official List* reserved for recording such names was styled the *Official List of Specific Trivial Names in Zoology*, the word "trivial" appearing also in the title of the *Official Index* reserved for recording rejected and invalid names of this category. Under a decision taken by the Fourteenth International Congress of Zoology, Copenhagen, 1953, the expression "specific name" was substituted for the expression "trivial name" and corresponding changes were made in the titles of the *Official List* and *Official Index* of such names (1953, *Copenhagen Decisions zool. Nomencl.* : 21). The changes in terminology so adopted have been incorporated in the Ruling given in the present *Opinion*.

22. The prescribed procedures were duly complied with by the International Commission on Zoological Nomenclature in dealing with the present case, and the present *Opinion* is accordingly hereby rendered in the name of the said International Commission by the under-signed Francis Hemming, Secretary to the International Commission on Zoological Nomenclature, in virtue of all and every the powers conferred upon him in that behalf.

23. The present *Opinion* shall be known as *Opinion* Two Hundred and Six (206) of the International Commission on Zoological Nomenclature.

DONE in London this Twentieth day of November, Nineteen Hundred and Fifty-Three.

*Secretary to the International Commission
on Zoological Nomenclature*

FRANCIS HEMMING

